

L Number	Hits	Search Text	DB	Time stamp
-	20	goetz-werner-k.in.	USPAT; US-PGPUB;	2004/08/13 16:12
-	0	camras-cichael-d.in.	EPO; JPO; IBM_TDB USPAT; US-PGPUB;	2004/08/13 16:12
-	27	camras-michael-d.in.	EPO; JPO; IBM_TDB USPAT; US-PGPUB; EPO; JPO;	2004/08/13
-	23	chen-changhua.in.	IBM_TDB USPAT; US-PGPUB; EPO; JPO;	2004/08/13 16:13
-	8	christenson-gina-l.in.	IBM_TDB USPAT; US-PGPUB; EPO; JPO;	2004/08/13
-	8	kern-scott-r.in.	IBM_TDB USPAT; US-PGPUB; EPO; JPO;	2004/08/13
-	25	kuo-chihping.in.	IBM_TDB USPAT; US-PGPUB; EPO; JPO;	2004/08/13
-	7	martin-paul-scott.in.	IBM_TDB USPAT; US-PGPUB; EPO; JPO;	2004/08/13
-	58	steigerwald-daniel-a.in.	IBM_TDB USPAT; US-PGPUB; EPO; JPO;	2004/08/13 16:13
-	30	kern-r-scott.in.	IBM_TDB USPAT; US-PGPUB; EPO; JPO;	2004/08/13
-	79	chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit\$4	IBM_TDB USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13
-	47	chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13
-	45	kern-r-scott.in.) and (light adj emit\$4 adj diode)) and ("GaN") (((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit\$4	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
		adj diode)) and ("GaN")) and (active adj (plate or layer or region))		

-	38	((((goetz-werner-k.in.	USPAT;	2004/08/13
		camras-michael-d.in. chen-changhua.in.	US-PGPUB;	16:13
		christenson-gina-l.in. kern-scott-r.in.	EPO; JPO;	
		kuo-chihping.in. martin-paul-scott.in.	IBM TDB	
		steigerwald-daniel-a.in.	_	
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj		
		(plate or layer or region))) and		
		("n-type" or (n adj type)) and ("p-type"		
i				
		or (p adj type))		0004/00/110
-	11	((((goetz-werner-k.in.	USPAT;	2004/08/13
		camras-michael-d.in. chen-changhua.in.	US-PGPUB;	16:13
		christenson-gina-l.in. kern-scott-r.in.	EPO; JPO;	
		kuo-chihping.in. martin-paul-scott.in.	IBM_TDB	
,		steigerwald-daniel-a.in.	_	
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj		
1	Į i	(plate or layer or region))) and		
		("n-type" or (n adj type)) and ("p-type"		
ł		or (p adj type))) and "II" and "III"		
	1050	(light adj emit\$4 adj diode) and	USPAT;	2004/08/13
-	1252		· ·	
		("n-type" or (n adj type)) and (("p-type"	US-PGPUB;	16:13
1		or (p adj type)) with ("GaN" or (gallium	EPO; JPO;	
İ		adj nitride)))	IBM_TDB	
-	36	((light adj emit\$4 adj diode) and	USPAT;	2004/08/13
		("n-type" or (n adj type)) and (("p-type"	US-PGPUB;	16:14
		or (p adj type)) with ("GaN" or (gallium	EPO; JPO;	
		adj nitride)))) and (("GaN" or (gallium	IBM TDB	
		adj nitride)) with concentration with	_	
		(chang\$4 or vari\$5))		
l <u>-</u>	1	"20040075097"	USPAT;	2004/08/13
	-	20010070037	US-PGPUB;	16:14
			EPO; JPO;	10.11
			IBM TDB	
	٠,	("5747832" "5753939" "5804839" "5987047" "		2004/09/13
-	5	[("5/4/832" "5/53939" "5604639		
			US-PGPUB;	16:14
			EPO; JPO;	
			IBM_TDB	
-	128	goetz-werner-k.in. camras-michael-d.in.	USPAT;	2004/08/13
	•	chen-changhua.in. christenson-gina-l.in.	US-PGPUB;	16:14
		kern-scott-r.in. kuo-chihping.in.	EPO; JPO;	
		martin-paul-scott.in.	IBM_TDB	
1	ļ	steigerwald-daniel-a.in. kern-r-scott.in.	_	
1 -	35	(((light adj emit\$4 adj diode) and	USPAT;	2004/08/13
}		("n-type" or (n adj type)) and (("p-type"	US-PGPUB;	16:14
}		or (p adj type)) with ("GaN" or (gallium	EPO; JPO;	
		adj nitride)))) and (("GaN" or (gallium	IBM TDB	
		adj nitride))) with concentration with	1511-155	
	1	(chang\$4 or vari\$5))) not ("20040075097"	" COOF 25 0 " \ T	NT \
	1	(("5747832" "5753939" "5804839" "5987047"	6UU3Z58").E	[N ·)
	1	(goetz-werner-k.in. camras-michael-d.in.		
1		chen-changhua.in. christenson-gina-l.in.		
	1	kern-scott-r.in. kuo-chihping.in.		
1	1	martin-paul-scott.in.		
		steigerwald-daniel-a.in.	,	
1 -	433	kelnghtsaditemmt\$ 4dySd66da300r\$(baser	USPAT;	2004/08/13
†		#d=5040de2) \$and \(\s\-\p804pe9-\$\r.\dpdad\right)r	US-PGPUB;	16:15
		type200000509ar9indidr) variation or	EPO; JPO;	
		chang\$4 or increas\$4 or decreas\$4) with	IBM TDB	
		concentration)		
1	1	CONCONCERCION	l	

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USPAT;
                                                            2004/08/13
(((light adj emit$ adj diode) or (laser
                                               US-PGPUB;
adj diode)) and (((p-type) or (p adj
                                                            16:22
                                               EPO; JPO;
type)) with (varying or variation or
                                               IBM TDB
chang$4 or increas$4 or decreas$4) with
concentration)) not ((goetz-werner-k.in.
camras-michael-d.in. chen-changhua.in.
christenson-gina-l.in. kern-scott-r.in.
kuo-chihping.in. martin-paul-scott.in.
steigerwald-daniel-a.in.
kern-r-scott.in.) (((light adj emit$4 adj
diode) and ("n-type" or (n adj type)) and
(("p-type" or (p adj type)) with ("GaN"
or (gallium adj nitride)))) and (("GaN"
or (gallium adj nitride)) with
concentration with (chang$4 or vari$5)))
"20040075097"
(("5747832"|"5753939"|"5804839"|"5987047"| 6005258"). N.)
((((((goetz-werner-k.in.
camras-michael-d.in. chen-changhua.in.
christenson-gina-l.in. kern-scott-r.in.
kuo-chihping.in. martin-paul-scott.in.
steigerwald-daniel-a.in.
kern-r-scott.in.) and (light adj emit$4
adj diode)) and ("GaN")) and (active adj
(plate or layer or region))) and
("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
substrate and (contact or electrode))
((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.)
and (light adj emit$4 adj diode) and
("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or
US-5747832-$ or US-5804839-$).did. or
(US-20040075097-$).did.) ((((light adj
emit$4 adj diode) and ("n-type" or (n adj
type)) and (("p-type" or (p adj type))
with ("GaN" or (gallium adj nitride))))
```

with ("GaN" or (gallium adj nitride)))
and (("GaN" or (gallium adj nitride))
with concentration with (chang\$4 or
vari\$5))) not ("20040075097"
(("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.)
(goetz-werner-k.in. camras-michael-d.in.
chen-changhua.in. christenson-gina-l.in.
kern-scott-r.in. kuo-chihping.in.
martin-paul-scott.in.
steigerwald-daniel-a.in.
kern-r-scott.in.) ((US-6657300-\$ or
US-5747832-\$ or US-5804839-\$).did. or
(US-20040075097-\$).did.))) and (substrate
and (contact\$4 or electrode))))

	1.00	(///light add amite add diada) am (lagan	HCDATT.	2004/00/12
_	169	((((light adj emit\$ adj diode) or (laser	USPAT; US-PGPUB;	2004/08/13 16:15
		adj diode)) and (((p-type) or (p adj		16:13
l		type)) with (varying or variation or	EPO; JPO;	
		chang\$4 or increas\$4 or decreas\$4) with	IBM_TDB	
		concentration)) not ((goetz-werner-k.in.		
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) (((light adj emit\$4 adj		
		diode) and ("n-type" or (n adj type)) and		
		(("p-type" or (p adj type)) with ("GaN"		
		or (gallium adj nitride)))) and (("GaN"		
		or (gallium adj nitride)) with		
i		concentration with (chang\$4 or vari\$5)))		
		"20040075097"		
				l., ,
		(("5747832" "5753939" "5804839" "5987047"	"6005258").E	[N.)
		((((((goetz-werner-k.in.		
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj		
		(plate or layer or region))) and		
		("n-type" or (n adj type)) and ("p-type"		
		or (p adj type))) and "II" and "III") and		
		substrate and (contact or electrode))		nat
j		((("5747832" "5753939" "5804839" "5987047"	"6005258").	PN.)
		and (light adj emit\$4 adj diode) and		
		("n-type" or (n adj type)) and ("p-type"		
-		or (p adj type))) ((US-6657300-\$ or		
		US-5747832-\$ or US-5804839-\$).did. or		
		(US-20040075097-\$).did.) ((((light adj		
		emit\$4 adj diode) and ("n-type" or (n adj		
		type)) and (("p-type" or (p adj type))		
ļ		with ("GaN" or (gallium adj nitride))))		
	1.1	and (("GaN" or (gallium adj nitride))	HCDAM.	2004/08/13
-	11	with (concentwation-with. (chang\$4 or	USPAT;	2004/08/13
		vamras)michael (d20f1400f15f197hanghua.in.	US-PGPUB;	16:18
		¢hr5342630n+g5763939n "66048368tt5987647"		N.)
		kgoethikpingrik.imartamrpauhisheet-dnin.	IBM_TDB	
		shemgehwaddudammelehrintenson-gina-l.in.		
}		kern-scotott.in.)kandchlhphngadn.emit\$4		
		mdjtdinopaul-andtt"GaN")) and (active adj		
Į.		speaterwaldademier-aegmon))) and		
		këmntypeCoot.in.adj(U9p6657and-\$"prtype"		
ļ		US-5943832t\$per) Wsafid04889-anddfdIIOr and		
		\$UBs20040035d97c3htdcd.pr)eAndtfodb\$trate		
_	4		"#808758"\ I	NP004/08/13
-	4		US-PGPUB;	16:18
		andawlight(gdjlemmtadjanjtdidde) and		16:10
Į		substypee end(n(adfityper)emmd\$4"padype"	EPO; JPO;	
ĺ		<pre>bayep)adj type))</pre>	IBM_TDB	0004/00/05
-	4	(US-6657300-\$ or US-5747832-\$ or	USPAT;	2004/08/13
		US-5804839-\$).did. or	US-PGPUB	16:18
i		(US-20040075097-\$).did.		
- !	35	((((light adj emit\$4 adj diode) and	USPAT;	2004/08/13
		("n-type" or (n adj type)) and (("p-type"	US-PGPUB;	16:18
1		or (p adj type)) with ("GaN" or (gallium	EPO; JPO;	
İ		adj nitride)))) and (("GaN" or (gallium	IBM TDB	
ŀ		adj nitride)) with concentration with		
l		(chang\$4 or vari\$5))) not ("20040075097"		
			"6005259"\ '	N \
		(("5747832" "5753939" "5804839" "5987047"	0003238").H	114 .)
j		(goetz-werner-k.in. camras-michael-d.in.		
		chen-changhua.in. christenson-gina-l.in.	l	1
		kern-scott-r.in. kuo-chihping.in.		
		kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in.		
		kern-scott-r.in. kuo-chihping.in.		

US-5747832-\$ or US-5804839-\$).did. or (US-20040075097-\$).did.))) and (substrate and (contact\$4 or electrode))

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((((light adj emit$ adj diode) or (laser
                                               USPAT;
                                                            2004/08/13
                                               US-PGPUB;
                                                            16:19
adj diode)) and (((p-type) or (p adj
                                               EPO; JPO;
type)) with (varying or variation or
chang$4 or increas$4 or decreas$4) with
                                               IBM TDB
concentration)) not ((goetz-werner-k.in.
camras-michael-d.in. chen-changhua.in.
christenson-gina-l.in. kern-scott-r.in.
kuo-chihping.in. martin-paul-scott.in.
steigerwald-daniel-a.in.
kern-r-scott.in.) (((light adj emit$4 adj
diode) and ("n-type" or (n adj type)) and
(("p-type" or (p adj type)) with ("GaN"
or (gallium adj nitride)))) and (("GaN"
or (gallium adj nitride)) with
concentration with (chang$4 or vari$5)))
"20040075097"
(("5747832"|"5753939"|"5804839"|"5987047"| "6005258"). HN.)
((((((goetz-werner-k.in.
camras-michael-d.in. chen-changhua.in.
christenson-gina-l.in. kern-scott-r.in.
kuo-chihping.in. martin-paul-scott.in.
steigerwald-daniel-a.in.
kern-r-scott.in.) and (light adj emit$4
adj diode)) and ("GaN")) and (active adj
(plate or layer or region))) and
("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
substrate and (contact or electrode))
((("5747832"|"5753939"|"5804839"|"5987047"||"6005258").|PN.)
and (light adj emit$4 adj diode) and
("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or
US-5747832-$ or US-5804839-$).did. or
(US-20040075097-$).did.) ((((light adj
emit$4 adj diode) and ("n-type" or (n adj
type)) and (("p-type" or (p adj type))
with ("GaN" or (gallium adj nitride))))
and (("GaN" or (gallium adj nitride))
with concentration with (chang$4 or
vari$5))) not ("20040075097"
(("5747832"|"5753939"|"5804839"|"5987047"||"6005258"). N.)
```

(goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-\$ or US-5747832-\$ or US-5804839-\$).did. or (US-20040075097-\$).did.))) and (substrate and (contact\$4 or electrode))))) and ("GaN" or (gallium adj nitride)) and substrate and ((active or emit\$4) adj layer)) and (((light adj emit\$ adj diode) or (laser adj diode))).ti. and (((p-type) or (p adj type)) with (varying or variation or chang\$4 or increas\$4 or decreas\$4) with concentration)

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USPAT;
                                                            2004/08/13
  (((((light adj emit$ adj diode) or
  (laser adj diode)) and (((p-type) or (p
                                               US-PGPUB;
                                                            16:19
  adj type)) with (varying or variation or
                                               EPO; JPO;
                                               IBM_TDB
  chang$4 or increas$4 or decreas$4) with
  concentration)) not ((goetz-werner-k.in.
  camras-michael-d.in. chen-changhua.in.
  christenson-gina-l.in. kern-scott-r.in.
  kuo-chihping.in. martin-paul-scott.in.
  steigerwald-daniel-a.in.
  kern-r-scott.in.) (((light adj emit$4 adj
  diode) and ("n-type" or (n adj type)) and
  (("p-type" or (p adj type)) with ("GaN"
  or (gallium adj nitride)))) and (("GaN"
  or (gallium adj nitride)) with
  concentration with (chang$4 or vari$5)))
  "20040075097"
  (("5747832"|"5753939"|"5804839"|"5987047"||6005258").#N.)
  (((((((goetz-werner-k.in.
  camras-michael-d.in. chen-changhua.in.
  christenson-gina-l.in. kern-scott-r.in.
  kuo-chihping.in. martin-paul-scott.in.
  steigerwald-daniel-a.in.
  kern-r-scott.in.) and (light adj emit$4
  adj diode)) and ("GaN")) and (active adj
  (plate or layer or region))) and
  ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
  substrate and (contact or electrode))
  ((("5747832"|"5753939"|"5804839"|"5987047"||"6005258").|PN.)
  and (light adj emit$4 adj diode) and
  ("n-type" or (n adj type)) and ("p-type"
  or (p adj type))) ((US-6657300-$ or
  US-5747832-$ or US-5804839-$).did. or
  (US-20040075097-$).did.) ((((light adj
  emit$4 adj diode) and ("n-type" or (n adj
  type)) and (("p-type" or (p adj type))
with ("GaN" or (gallium adj nitride))))
  and (("GaN" or (gallium adj nitride))
  with concentration with (chang$4 or
  vari$5))) not ("20040075097"
  (("5747832"|"5753939"|"5804839"|"5987047"| (6005258"). HN.)
  (goetz-werner-k.in. camras-michael-d.in.
  chen-changhua.in. christenson-gina-l.in.
  kern-scott-r.in. kuo-chihping.in.
  martin-paul-scott.in.
  steigerwald-daniel-a.in.
  kern-r-scott.in.) ((US-6657300-$ or
  US-5747832-$ or US-5804839-$).did. or
  (US-20040075097-$).did.))) and (substrate
  and (contact$4 or electrode))))) and
  ("GaN" or (gallium adj nitride)) and
  substrate and ((active or emit$4) adj
                                                            2004/08/13
 lemer$# and diodeghanddjubmiratedandiode)
                                               USPAT;
                                               US-PGPUB;
                                                            17:12
  of((pasypeadaddibdyer).br.(pnddj(typeypdj)
  bayép) advith pécontath oracyentrode)) and
                                               EPO; JPO;
                                               IBM TDB
  vavaa$5onrochehg$$4near2nconee$$retion)
  decreas$4) with concentration)) not
  (((((light adj emit$4 adj diode) and
  ("n-type" or (n adj type)) and (("p-type"
  or (p adj type)) with ("GaN" or (gallium
  adj nitride)))) and (("GaN" or (gallium
  adj nitride)) with concentration with
  (chang$4 or vari$5))) not ("20040075097"
  (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.)
  (goetz-werner-k.in. camras-michael-d.in.
  chen-changhua.in. christenson-gina-l.in.
  kern-scott-r.in. kuo-chihping.in.
  martin-paul-scott.in.
  steigerwald-daniel-a.in.
  kern-r-scott.in.) ((US-6657300-$ or
  US-5747832-$ or US-5804839-$).did. or
/US=20040075097=$).did.))) and (substrate 8/And (contact 4 PMr elegrode)))
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Search History

-	24	((emit\$4 adj diode) and substrate and	USPAT;	2004/08/13
!		((((p-type) adj layer) or (p adj type adj	US-PGPUB;	17:13
		layer)) with (contact or electrode)) and	EPO; JPO;	
		((var\$5 or chang\$4) near2 concentration))	IBM_TDB	
		not ((goetz-werner-k.in.		
	·	camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) "20040075097"		
		(("5747832" "5753939" "5804839" "5987047"	"6005258").F	N.)
		((((((goetz-werner-k.in.	,	·
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj		
		(plate or layer or region))) and		
		("n-type" or (n adj type)) and ("p-type"		
		or (p adj type))) and "II" and "III") and		
		substrate and (contact or electrode))		!
		((("5747832" "5753939" "5804839" "5987047"	1"6005258")	DN)
		and (light adj emit\$4 adj diode) and	0000200 / .	111.7
		("n-type" or (n adj type)) and ("p-type"	:	
		or (p adj type))) ((US-6657300-\$ or		
		US-5747832-\$ or US-5804839-\$).did. or		
		(US-20040075097-\$).did.) ((((light adjemit\$4 adj diode) and ("n-type" or (n adj		
	1	type)) and (("p-type" or (p adj type))		
		type;) and ((p-type of (p adj type;) with ("GaN" or (gallium adj nitride))))		
	:	and (("GaN" or (gallium adj nitride))		
		withghonedntemitomnwith; (dhede\$40or	USPAT;	2004/08/13
_	•	waimghonaamceariomnylang (dmanggaour waigas}eminoing"adgadaaaagga"and	US-PGPUB;	16:59
		(("6BaB632" or575B3999" ad5804B36Htrae23A47"		
	1	(((dmangsa wisvanss) adgodencentrabmula)	IBM TDB	,
]	thentthermount in the conjustion of the conjus	1211-122	
_	2	kethightadj.in. christenson-gina-i.in. kethightadj.imitkingchdhpdhgdin.or	USPAT;	2004/08/13
_	3	marghn-paultingtadindiode) and	US-PGPUB;	16:59
	1	stechengaldedamaes55a.adj concentration)	EPO; JPO;	1 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -
		kema-r	IBM_TDB	
		Nayarayandt (goets-wandanybey) add		
		den tage to the control of the con		
		andistensentginerlelectkede) \$cott-r.in.		
	İ	kuo-chihping.in. martin-paul-scott.in.		
	Ì	steigerwald-daniel-a.in.		
		kern-r-scott.in.)		
_	37	"LED" and substrate and (((p-type) adj	USPAT;	2004/08/13
	"	layer) or (p adj type adj layer)) with	US-PGPUB;	17:12
		(contact or electrode)) and ((var\$5 or	EPO; JPO;	
		chang\$4) near2 concentration)	IBM TDB	
_	233	"LED" and substrate and (((p-type)) or	USPAT;	2004/08/13
	255	(p adj type)) with (contact or	US-PGPUB;	17:13
	-	electrode)) and ((var\$5 or chang\$4) near2	EPO; JPO;	
		concentration)	IBM TDB	
1	1			·

	("LED" and substrate and ((((p-type) adj	USPAT;	2004/08/13
- 10	layer) or (p adj type adj layer)) with	USPAT; US-PGPUB;	2004/08/13 17:15
	(contact or electrode)) and ((var\$5 or	EPO; JPO;	
	chang\$4) near2 concentration)) not	IBM_TDB	
	((goetz-werner-k.in. camras-michael-d.in.	-	
	chen-changhua.in. christenson-gina-l.in.		
	kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in.		
	steigerwald-daniel-a.in.		
	kern-r-scott.in.) "20040075097"		
	(("5747832" "5753939" "5804839" "5987047"	"6005258").F	N.)
	((((((goetz-werner-k.in.		
	camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in.		
	kuo-chihping.in. martin-paul-scott.in.		
	steigerwald-daniel-a.in.		
	kern-r-scott.in.) and (light adj emit\$4		
	adj diode)) and ("GaN")) and (active adj		
	(plate or layer or region))) and		
	("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and		
Ì	substrate and (contact or electrode))		
	((("5747832" "5753939" "5804839" "5987047"	"6005258").	PN.)
	and (light adj emit\$4 adj diode) and		
	("n-type" or (n adj type)) and ("p-type"		
	or (p adj type))) ((US-6657300-\$ or US-5747832-\$ or US-5804839-\$).did. or		
	(US-20040075097-\$).did.) ((((light adj		
	emit\$4 adj diode) and ("n-type" or (n adj		
	type)) and (("p-type" or (p adj type))		
	with ("GaN" or (gallium adj nitride))))		
	and (("GaN" or (gallium adj nitride))		
	with concentration with (chang\$4 or vari\$5))) not ("20040075097"		
	(("5747832" "5753939" "5804839" "5987047"	"6005258").F	N.)
	(goetz-werner-k.in. camras-michael-d.in.	,	,
	chen-changhua.in. christenson-gina-l.in.		
	kern-scott-r.in. kuo-chihping.in.		
	martin-paul-scott.in. steigerwald-daniel-a.in.		
	kern-r-scott.in.) ((US-6657300-\$ or		
	US-5747832-\$ or US-5804839-\$).did. or		
	(US-20040075097-\$).did.))) and (substrate		
	and (contact\$4 or electrode)))		
	((((((light adj emit\$ adj diode) or (laser adj diode)) and (((p-type) or (p		
	adj type)) with (varying or variation or	i	
	chang\$4 or increas\$4 or decreas\$4) with		
	concentration)) not ((goetz-werner-k.in.		
	camras-michael-d.in. chen-changhua.in.		
	christenson-gina-l.in. kern-scott-r.in.		
	<pre>kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in.</pre>		
	kern-r-scott.in.) (((light adj emit\$4 adj		
	diode) and ("n-type" or (n adj type)) and		
	(("p-type" or (p adj type)) with ("GaN"		
	or (gallium adj nitride)))) and (("GaN"		
	or (gallium adj nitride)) with concentration with (chang\$4 or vari\$5)))		
	"20040075097"		
	(("5747832" "5753939" "5804839" "5987047"	"6005258").E	N.)
	((((((goetz-werner-k.in.		
	camras-michael-d.in. chen-changhua.in.		
	christenson-gina-l.in. kern-scott-r.in.		
	kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in.		
	kern-r-scott.in.) and (light adj emit\$4		
	adj diode)) and ("GaN")) and (active adj		
	(plate or layer or region))) and		
	("n-type" or (n adj type)) and ("p-type"		
	or (p adj type))) and "II" and "III") and		
Search History 8	substrate and (contact or electrode)) / t6(0974983207"5753938a9a5804839"1"5987047"	1"6005258"\	PN.)
·	and (light adj emit\$4 adj diode) and		1/
::\APPS\EAST\Worksp	adësttope 1400. Wapadj type)) and ("p-type"		
1	or (p adj type))) ((US-6657300-\$ or	ı	1

		111	TICD? T	2004/00/12
-	181	("LED" and substrate and ((((p-type)) or	USPAT;	2004/08/13
		<pre>(p adj type)) with (contact or electrode)) and ((var\$5 or chang\$4) near2</pre>	US-PGPUB; EPO; JPO;	17:15
		concentration)) not ((goetz-werner-k.in.	IBM_TDB	
		camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) "20040075097"		
	i	(("5747832" "5753939" "5804839" "5987047"	"6005258") F	N .)
ĺ		(((((((qoetz-werner-k.in.	0000200 ,.1	··· /
	ł	camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
İ		kuo-chihping.in. martin-paul-scott.in.	ļ	
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj		•
		(plate or layer or region))) and		
	i	("n-type" or (n adj type)) and ("p-type"		
	i	or (p adj type))) and "II" and "III") and		
		substrate and (contact or electrode))		
	j	((("5747832" "5753939" "5804839" "5987047"	"6005258").	PN.)
]	and (light adj emit\$4 adj diode) and		
		("n-type" or (n adj type)) and ("p-type"		
		or (p adj type))) ((US-6657300-\$ or		
		US-5747832-\$ or US-5804839-\$).did. or		
	j	(US-20040075097-\$).did.) (((((light adj		
		emit\$4 adj diode) and ("n-type" or (n adj		
		type)) and (("p-type" or (p adj type))		
		with ("GaN" or (gallium adj nitride))))		
		and (("GaN" or (gallium adj nitride))		
		with concentration with (chang\$4 or		
	į	<pre>vari\$5))) not ("20040075097" (("5747832" "5753939" "5804839" "5987047" </pre>	" COOESEO!! \ T	 NT
		(m5/4/832" "5/53939" "5804639" "596/04/" (goetz-werner-k.in. camras-michael-d.in.	6003236).E	N.)
	İ	chen-changhua.in. christenson-gina-l.in.		
		kern-scott-r.in. kuo-chihping.in.		
		martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) ((US-6657300-\$ or		
		US-5747832-\$ or US-5804839-\$).did. or		
		(US-20040075097-\$).did.))) and (substrate		
		and (contact\$4 or electrode)))		
		((((((light adj emit\$ adj diode) or		
	1	(laser adj diode)) and (((p-type) or (p		
	1	adj type)) with (varying or variation or		
		chang\$4 or increas\$4 or decreas\$4) with		
		concentration)) not ((goetz-werner-k.in.		
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
	}	steigerwald-daniel-a.in.		
		kern-r-scott.in.) (((light adj emit\$4 adj		
		diode) and ("n-type" or (n adj type)) and		
		(("p-type" or (p adj type)) with ("GaN"		
		or (gallium adj nitride)))) and (("GaN"		
]	or (gallium adj nitride)) with		
		concentration with (chang\$4 or vari\$5)))		
		"20040075097" (("5747832" "5753939" "5804839" "5987047"	"6005259"\ "	M /
		(("5/4/832" "5/53939" "5804839" "598/04/" ((((((goetz-werner-k.in.	0003230).1	1
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj		
		(plate or layer or region))) and		
		("n-type" or (n adj type)) and ("p-type"		
		or (p adj type))) and "II" and "III") and		
		substrate and (contact or electrode))	•	
Conneh W		, ((\"5747832" "5753939" "5804839" "5987047"	"6005258") .	PN.)
Search Histo	ory 8	and (light: adj mits add) diode) and		
.		("n-type" or (n adj type)) and ("p-type"		
C:\APPS\EASI	r\Worksp	aess(poadi44ppabb) ((US-6657300-\$ or		
	•	US-5747832-\$ or US-5804839-\$).did. or	•	

```
2004/08/13
                    (("LED" and substrate and ((((p-type)) or
                                                                  USPAT:
                                                                  US-PGPUB;
                                                                              17:16
                     (p adj type)) with (contact or
                                                                  EPO; JPO;
                    electrode)) and ((var$5 or chang$4) near2
                                                                  IBM TDB
                    concentration)) not ((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) "20040075097"
                     (("5747832"|"5753939"|"5804839"|"5987047"|"6005258"). N.)
                     (((((((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) and (light adj emit$4
                    adj diode)) and ("GaN")) and (active adj
                     (plate or layer or region))) and
                    ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
                    substrate and (contact or electrode))
                     ((("5747832"|"5753939"|"5804839"|"5987047"||"6005258").PN.)
                    and (light adj emit$4 adj diode) and
                     ("n-type" or (n adj type)) and ("p-type"
                    or (p adj type))) ((US-6657300-$ or
                    US-5747832-$ or US-5804839-$).did. or
                     (US-20040075097-$).did.) ((((light adj
                    emit$4 adj diode) and ("n-type" or (n adj
                    type)) and (("p-type" or (p adj type))
                    with ("GaN" or (gallium adj nitride))))
and (("GaN" or (gallium adj nitride))
                    with concentration with (chang$4 or
                    vari$5))) not ("20040075097"
                     (("5747832"|"5753939"|"5804839"|"5987047"|"6005258"). N.)
                     (goetz-werner-k.in. camras-michael-d.in.
                     chen-changhua.in. christenson-gina-l.in.
                    kern-scott-r.in. kuo-chihping.in.
                    martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) ((US-6657300-$ or
                    US-5747832-$ or US-5804839-$).did. or
                     (US-20040075097-\$).did.))) and (substrate)
                    and (contact$4 or electrode)))
                     ((((((light adj emit$ adj diode) or
                     (laser adj diode)) and (((p-type) or (p
                    adj type)) with (varying or variation or
                     chang$4 or increas$4 or decreas$4) with
                    concentration)) not ((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                     christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                     steigerwald-daniel-a.in.
                    kern-r-scott.in.) (((light adj emit$4 adj
                    diode) and ("n-type" or (n adj type)) and
                     (("p-type" or (p adj type)) with ("GaN"
                     or (gallium adj nitride)))) and (("GaN"
                     or (gallium adj nitride)) with
                     concentration with (chang$4 or vari$5)))
                     "20040075097"
                     (("5747832"|"5753939"|"5804839"|"5987047"||6005258"). N.)
                     (((((((goetz-werner-k.in.
                     camras-michael-d.in. chen-changhua.in.
                     christenson-gina-l.in. kern-scott-r.in.
                     kuo-chihping.in. martin-paul-scott.in.
                     steigerwald-daniel-a.in.
                     kern-r-scott.in.) and (light adj emit$4
                     adj diode)) and ("GaN")) and (active adj
                     (plate or layer or region))) and
                    ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
                     substrate and (contact or electrode))
                  8 and 11ght: adj Punits add 1 diode) and
Search History
                     ("n-type" or (n adj type)) and ("p-type"
C:\APPS\EAST\Workspaces\P07d1448p@bb) ((US-6657300-$ or
                    US-5747832-$ or US-5804839-$).did. or
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- 66	((("LED" and substrate and ((((p-type)) USPAT; 2004/08/13
	or (p adj type)) with (contact or US-PGPUB; 17:17 electrode)) and ((var\$5 or chang\$4) near2 EPO; JPO;
	electrode)) and ((var\$5 or chang\$4) near2 EPO; JPO; concentration)) not ((goetz-werner-k.in. IBM TDB
+	camras-michael-d.in. chen-changhua.in.
1	christenson-gina-l.in. kern-scott-r.in.
	kuo-chihping.in. martin-paul-scott.in.
]	steigerwald-daniel-a.in.
	kern-r-scott.in.) "20040075097"
	(("5747832" "5753939" "5804839" "5987047" <mark>"</mark> 6005258").申N.)
1	((((((goetz-werner-k.in.
	camras-michael-d.in. chen-changhua.in.
	christenson-gina-l.in. kern-scott-r.in.
	kuo-chihping.in. martin-paul-scott.in.
	steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit\$4
	adj diode)) and ("GaN")) and (active adj
	(plate or layer or region))) and
	("n-type" or (n adj type)) and ("p-type"
	or (p adj type))) and "II" and "III") and
	substrate and (contact or electrode))
	((("5747832" "5753939" "5804839" "5987047" "6005258") PN.)
	and (light adj emit\$4 adj diode) and
	("n-type" or (n adj type)) and ("p-type"
	or (p adj type))) ((US-6657300-\$ or
	US-5747832-\$ or US-5804839-\$).did. or
	(US-20040075097-\$).did.) (((((light adj
	<pre>emit\$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type))</pre>
	with ("GaN" or (gallium adj nitride))))
	and (("GaN" or (gallium adj nitride))
	with concentration with (chang\$4 or
	vari\$5))) not ("20040075097"
:	(("5747832" "5753939" "5804839" "5987047" "6005258"). N.)
	(goetz-werner-k.in. camras-michael-d.in.
	chen-changhua.in. christenson-gina-l.in.
	kern-scott-r.in. kuo-chihping.in.
	martin-paul-scott.in.
	steigerwald-daniel-a.in.
	US-5747832-\$ or US-5804839-\$).did. or
	(US-20040075097-\$).did.))) and (substrate
	and (contact\$4 or electrode)))
ĺ	(((((light adj emit\$ adj diode) or
	(laser adj diode)) and (((p-type) or (p
ļ	adj type)) with (varying or variation or
	chang\$4 or increas\$4 or decreas\$4) with
1	concentration)) not ((goetz-werner-k.in.
	camras-michael-d.in. chen-changhua.in.
	christenson-gina-l.in. kern-scott-r.in.
	kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in.
	stelgerwald-daniel-a.in.
	diode) and ("n-type" or (n adj type)) and
	(("p-type" or (p adj type)) with ("GaN"
	or (gallium adj nitride)))) and (("GaN"
	or (gallium adj nitride)) with
	concentration with (chang\$4 or vari\$5)))
	"20040075097"
	(("5747832" "5753939" "5804839" "5987047" "6005258"). N.)
	(((((((goetz-werner-k.in.
	camras-michael-d.in. chen-changhua.in.
	christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in.
	steigerwald-daniel-a.in.
	kern-r-scott.in.) and (light adj emit\$4
	adj diode)) and ("GaN")) and (active adj
	(plate or layer or region))) and
	("n-type" or (n adj type)) and ("p-type"
	or (p adj type))) and "II" and "III") and
	substrate and (contact or electrode))
Search History	((("5747832" "5753939" "5804839" "5987047" "6005258") PN.)
	a that a tight a diffinite a difficient and a diffinite and a diffinite a diff
C. \ ADDC\ EXCE\ W1	("n-type" or (n adj type)) and ("p-type" paess(poadj44gpakb) ((US-6657300-\$ or
C. (APPS (LAST (WORKS)	US-5747832-\$ or US-5804839-\$).did. or

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((("LED" and substrate and ((((p-type))
                                                               USPAT;
                                                                           2004/08/13
                    or (p adj type)) with (contact or
                                                               US-PGPUB;
                                                                           17:18
                    electrode)) and ((var$5 or chang$4) near2
                                                               EPO; JPO;
                                                               IBM_TDB
                    concentration)) not ((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) "20040075097"
                    (("5747832"|"5753939"|"5804839"|"5987047"||'6005258"). 引N.)
                    ((((((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) and (light adj emit$4
                    adj diode)) and ("GaN")) and (active adj
                    (plate or layer or region))) and
                    ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
                    substrate and (contact or electrode))
                    ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.)
                    and (light adj emit$4 adj diode) and
                    ("n-type" or (n adj type)) and ("p-type"
                    or (p adj type))) ((US-6657300-$ or
                    US-5747832-$ or US-5804839-$).did. or
                    (US-20040075097-$).did.) (((((light adj
                    emit$4 adj diode) and ("n-type" or (n adj
                    type)) and (("p-type" or (p adj type))
                    with ("GaN" or (gallium adj nitride))))
                    and (("GaN" or (gallium adj nitride))
                    with concentration with (chang$4 or
                    vari$5))) not ("20040075097"
                    (("5747832"|"5753939"|"5804839"|"5987047"||6005258"). 於.)
                    (goetz-werner-k.in. camras-michael-d.in.
                    chen-changhua.in. christenson-gina-l.in.
                    kern-scott-r.in. kuo-chihping.in.
                    martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) ((US-6657300-$ or
                    US-5747832-$ or US-5804839-$).did. or
                    (US-20040075097-$).did.))) and (substrate
                    and (contact$4 or electrode)))
                    ((((((light adj emit$ adj diode) or
                    (laser adj diode)) and (((p-type) or (p
                    adj type)) with (varying or variation or
                    chang$4, or increas$4 or decreas$4) with
                    concentration)) not ((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) (((light adj emit$4 adj
                    diode) and ("n-type" or (n adj type)) and
                    (("p-type" or (p adj type)) with ("GaN"
                    or (gallium adj nitride)))) and (("GaN"
                    or (gallium adj nitride)) with
                    concentration with (chang$4 or vari$5)))
                    "20040075097"
                    (("5747832"|"5753939"|"5804839"|"5987047"| 16005258"). 財N.)
                    ((((((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) and (light adj emit$4
                    adj diode)) and ("GaN")) and (active adj
                    (plate or layer or region))) and
                    ("n-type" or (n adj type)) and ("p-type"
                    or (p adj type))) and "II" and "III") and
                    substrate and (contact or electrode))
                  Search History
                    ("n-type" or (n adj type)) and ("
                                                     'p-type"
c:\APPS\EAST\Workspaces\POadi44gpesb) ((US-6657300-$ or
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US-5747832-\$ or US-5804839-\$).did. or